Draft Summary of the Engineering and Operations Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
May 30, 2003

The Department of Water Resources (DWR) hosted the Engineering and Operations Work Group (EOWG) meeting on May 30, 2003 at the Oroville Field Division.

A summary of the discussions, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present an informational summary for interested parties who could not attend the meeting. The following attachments are provided with this summary:

Attachment 1 Meeting Agenda
Attachment 2 Meeting Attendees
Attachment 3 Potential Model Scenarios
Attachment 4 Environmental Work Group Resource Action Matrix

Introduction
Attendees were welcomed to the EOWG meeting. The meeting agenda and desired outcomes were reviewed. The meeting agenda and list of meeting attendees and their affiliations are appended to this summary as Attachments 1 and 2, respectively.

April 25, 2003 Meeting Summary and Action Items
A summary of the April 25, 2003 EOWG is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Action Item EO#73:	Obtain SCOR and OWID discharge data for input into modeling (flow-stage and temperature).
Responsible:	DWR/Butte County
Status:	Lori Brown with DWR reported she received the SCOR data from Butte County and forwarded it to Systech Engineering for incorporation into the temperature model. Gridley uses evaporation ponds so there is no return flow to the Feather River from that source.

Action Item EO#74:	Ask Dave Olson (SWRI) to contact Carl Chen (Systech) regarding temperature data used to develop SP-F10, Task 1E.
Responsible:	DWR
Status:	Curtis Creel, Operations Resource Area Manager for DWR, reported that no modeling specific to temperatures in pools and riffles was needed although there is still interest in looking at specific locations such as Shanghai Bend or Sunset Pumps for modifications.

Curtis suggested that as follow-up to an earlier request by Metropolitan Water District (MWD), he would like to look at the existing studies regarding flood control completed by the Corps of Engineers (Comprehensive Study) before deciding what type of modeling would be appropriate to address flood management issues.

Curtis outlined the modeling workshop scheduled from 9 a.m. – 4 p.m. on June 24, 2003 at the Kelley Ridge Golf Course Meeting Room. He said the workshop would cover CALSIM II (Statewide Operations), HYDROPS (Local Operations), WQRRS (Temperature), and HEC-RAS

(Flow-Stage) models. The day would be divided into a morning non-technical overview session and an afternoon session devoted to more technical individual model presentations that bridge to a discussion of the process to complete model runs. Curtis emphasized the need to limit model runs by estimating that each scenario will cost approximately $100,000 and take about a month or so to complete the iterations although with time and experience, that amount should decrease some. The cost includes considerable human analysis of modeling results. Derek Hilts representing USFWS asked if the HYDROPS model was private or if agencies could be involved and become experts. Curtis responded that a license is required to run the model and that DWR was going to work with the consulting team to run the model and interpret the data.

Ken Kules representing MWD suggested that other models should also be included in the workshop such as PHABSIM and Fluvial 12. The EOWG discussed the potential to hold a separate workshop for the rest of the models that we expect to use in the relicensing process. Curtis described the target audience for the operations model workshop as very broad, including non-technical Plenary Group participants and technical staff from State and federal agencies. Ken suggested the workshop be less technical with broader coverage of all models to be used and focus on topics such as how model results should be used, how data becomes information, and the limitations of models. Curtis agreed to consider Ken's suggestion and will develop an agenda for the June 24th modeling workshop and distribute it to the EOWG for review and comment.

Proposed Modeling Scenarios

Curtis distributed a document titled 'Draft Potential Model Scenarios', revised May 5, 2003 (see Attachment 3) and explained that the document was crafted after receiving input from various interests and is meant to generate dialogue regarding the first set of model run scenarios. He noted a goal is to get the most information from the fewest number of runs. He explained that the scenarios described in the document are not really bookends but rather sensitivity analyses designed to test how sensitive the system is to perturbations of variables such as pump back.

Curtis described the current conditions (No Action) scenario and the future conditions that will add 2030 future conditions including land use changes consistent with the Bulletin 160 process. The scenario assumes full delivery to the Feather River service area and 27,000 acre-feet delivery to Butte County. He noted when evaluating temperature conflicts using HYDROPS, it will not be necessary to re-run CALSIM II each time.

Butte County pointed out that the introduction to the temperature conflicts section of the document still includes language that suggests interest in warmer water for agricultural diversions may exist when in fact the districts have made it clear there is interest in this issue. The language was changed to reflect that there is interest in providing warm water from Thermalito Afterbay to the farmers.

Curtis agreed to have his staff further develop the potential model scenarios and distribute a revised draft to the EOWG for review and comment. He will also summarize the information in spreadsheet format and treat it as a working document. The FWS suggested a joint Environmental and Engineering and Operations Task Force might be appropriate to discuss the water temperature issues.

The EOWG discussed Temperature Sensitivity Scenario 1a and Curtis noted that the Environmental Work Group (EWG) would have input on appropriate flows. He added that the project has released additional flows to meet temperature requirements at Robinson Riffle the past two years. Pulse flows are meant to mimic seasonal high spring flows although the EOWG noted that no scenario currently mimics the natural or unimpaired hydrograph. Curtis noted that the model runs will need to be prioritized once the scenarios are identified and reminded the EOWG that the modeling tools are a resource for the entire collaborative.

The FWS asked how the Environmental Water Account (EWA) affects the operations of Oroville. Curtis explained that the EWA, implemented by the Bureau of Reclamation and DWR, is a set of tools the fisheries agencies can use to do real-time operational changes in the Delta. The program is not modeled in CALSIM II, and Curtis reported that it is not assumed to have an appreciable effect on Oroville Facilities operations.

The EOWG discussed the downstream flood scenario and Curtis explained that this scenario evolved from Yuba City comments. He expects to see a proposed resource action from the city that relates to flood management. Ken Kules asked if HYDROPS would not be providing some answers for relicensing decision-making. Curtis reiterated his intention to review the work done for the Comprehensive Study before proceeding with this scenario.

Coordination with Work Groups for Future Needs

The EOWG discussed various methods to get the modeling information out to the various Work Groups. Curtis suggested DWR would host another more intensive workshop in late summer to evaluate model run data with the Work Groups and plans for additional model scenario runs that are necessary to aid in decision-making. This workshop would be structured to present and evaluate results across resource areas and plan for the next steps for model runs. Curtis suggested the workshop could be multi-day and agreed to develop an agenda for the workshop and distribute a draft to the EOWG for review and comment.

Carl Chen with the consulting team provided an update on the temperature modeling effort. He is currently developing a graphical user interface so that others can easily run the model. He will provide CDs at the June 24th modeling workshop.

Preliminary Environmental PM&Es Related to Modeling Work

Terry Mills, Environmental Resource Area Manager, discussed the efforts of the EWG to develop potential resource actions to address project effects. He distributed a matrix (Attachment 4) and reviewed the column headings. The EOWG discussed how modeling could assist in the evaluation of resource actions such as gravel placement and movement, or actions proposed that might adjust temperatures to extend spawning habitat availability. Terry suggested that a Task Force might be useful to evaluate flows. Ken Kules suggested that the EWG determine what questions they have related to each resource action and what answers are expected. He also suggested clarifying the analytical approach so we can determine which models may be used for the analysis. Curtis suggested an additional column to identify appropriate model, model needs, and constraints.

Terry acknowledged the tension in the EWG when discussing conflicts but suggested they would benefit from seeing the bigger picture that includes operations. He reiterated his desire to use a joint Task Force to focus on specific issues and pointed out the need to bridge between structural and operational options to address issues. The EOWG agreed such joint discussions are necessary and suggested focused Task Force or breakout sessions within the multi-day workshop.

Next Steps

The participants were reminded that the June meeting date will follow closely behind the Modeling Workshop date and provides the opportunity to discuss results of the workshop and develop next steps for the EOWG. The meeting will focus on modeling scenarios. The participants agreed to meet:

Date: June 27, 2003
Time: 10:00 – 12:00 am
Location: Video and teleconference (OFD, JOC, SJFD and Headquarters, Room 601)

Action Items

The following action items were identified by the Engineering and Operations Work Group and includes a description of the action, the participant responsible for the action, and due date.

Action Item EO#75: Look at the existing studies regarding flood control completed by the Corps of Engineers (Comprehensive Study) to determine what needs to be modeled for the relicensing process.
Responsible: DWR/Consulting team
Due Date: August 1, 2003

Action Item EO#76: Further develop the model scenarios and distribute a revised draft to the EOWG for review and comment. Summarize the information in spreadsheet format.
Responsible: DWR/Consulting team
Due Date: June 27, 2003

Action Item EO#77: Develop an agenda for the June 24th modeling workshop and distribute it to the EOWG for review and comment.
Responsible: DWR/Consulting team
Due Date: June 27, 2003

Action Item EO#78: Develop an agenda for multi-day, cross resource model results workshop and distribute a draft to the EOWG for review and comment.
Responsible: DWR/Consulting team
Due Date: June 27, 2003